

Innovations and Traditions in Nutrient Management

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Innovation: To introduce new methods, ideas or products. Tradition: The transmission of customs or beliefs from generation to generation.

How do these two words, which by their definition are completely opposite, end up being the motto of a conference for nutrient management? When looking at the history of manure use in North Dakota, we can see a cyclic pattern. In recent years, we are back at the start of that cycle, but with a new perspective on manure use.

Producers and researchers have known for years that manure contains certain nutrients that are necessary for plant growth, and that by spreading this product on crop or hay land, we are altering yield potential. However, profit sustains a business, so when purchasing commercial fertilizers was more affordable than paying for manure-spreading costs and we knew exactly what the nutrient content of every pound being applied was, manure use as a fertilizer declined.

Since then, we have watched commercial fertilizer costs climb to all-time highs, which makes the challenge of keeping a farming/ranching business profitable that much more challenging. And now, in the most recent years, we seem to be back at the start of the manure-use cycle in North Dakota.

What has changed? We not only have the tradition, and all of the knowledge that comes with it, of using manure as a fertilizer, we also have innovations that help producers best utilize their product with minimal impacts to the environment. You could say that innovations and traditions in nutrient management help livestock and crop producers be even better stewards of the land that is their livelihood.

By using knowledge of the past, along with current sampling and calibration techniques for manure and commercial fertilizers, as well as a nutrient management plan, whole-farm nutrient balance has never been more accessible or attainable for producers.

During the recent Multi-State Comprehensive Nutrient Management Planning Conference (CNMP) held in Fargo on Nov. 18-20, three North Dakota livestock/crop producers sat on a panel and answered questions from nutrient management professionals dealing with anything from hands-on management to field management to rules and regulations. Personnel from the Environmental Protection Agency, state regulatory agencies, Extension Service and Natural Resources Conservation Service; 319 Watershed Program coordinators; engineers; and technical service providers attended and presented at the conference.

Having interaction with manure managers seems to be a necessary component of program development for the people from all seven states who attended the conference. According to the results of the post-conference survey taken by participants, the producer panel was scored as the most relevant session of the entire conference.

The goal of this conference was to gather nutrient management professionals from around the region to network on current concerns pertaining to water quality and nutrient management relative to livestock production. Besides the producer panel, those in attendance had the opportunity to participate in a preconference tour of the North Dakota State University livestock research facilities. At each stop, the facility manager explained the manure-handling process,

and a scientist joined the group at each stop to discuss the latest research being conducted at that facility. Although everyone on the tour had seen a manure storage facility during his or her career, NDSU's livestock research facilities have the unique feature of being within city limits.

Other conference session topics included beef cattle facility options, water management, state updates and compost management, and a panel of state and national regulators answered audience questions.

The first conference for regional representatives was held in Nebraska in 2005 and the second conference was held in South Dakota in 2010. Slide presentations from the North Dakota Multi-State CNMP conference can be found at www.slideshare.net/tag/cnmp2013.

Through various conversations and interactions during this conference, we learned that although innovations keep us pushing forward in the ever-changing world of agriculture, we rely on traditions of the past for the base of our knowledge.



Tour participants of the Multi-State Comprehensive Nutrient Management Planning Conference walk through the NDSU sheep teaching and research unit.